United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance
Office of Criminal Enforcement, Forensics and Training

National Enforcement Investigations Center

NEIC

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NEIC CIVIL INVESTIGATION REPORT
Limetree Bay Refinery, LLC
Limetree Bay Terminals, LLC
(Limetree Bay)
Christiansted, U.S. Virgin Islands

Investigation Dates:
May 3-7, 2021

MICHAEL LUKOWICH

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Michael Lukowich, Project Manager, NEIC

Authorized for Release by:

REBECCA CONNELL

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Rebecca Connell, Field Branch Chief, NEIC

Report Prepared for:

EPA Region 2
Multimedia Permits and Compliance Branch
Caribbean Environmental Protection Division
San Juan, Puerto Rico 00907

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER
P.O. Box 25227
Building 25, Denver Federal Center
Denver, Colorado 80225

CONTENTS

TABLES

APPENDICES

This Contents page shows all the sections contained in this report and provides a clear indication of the end of this report.

INVESTIGATION OVERVIEW

PROJECT OBJECTIVE

The U.S. Environmental Protection Agency (EPA) Region 2 (Region) requested EPA's National Enforcement Investigations Center (NEIC) to conduct a Clean Water Act (CWA) compliance investigation of the Limetree Bay Refining, LLC and Limetree Bay Terminals, LLC (combined as "Limetree Bay") facility located at 1 Estate Hope, Christiansted, U.S. Virgin Islands (USVI), for Limetree Bay's compliance with Sections 301(a), 308(a), and 402 of the CWA and the 2008 territorial pollutant discharge elimination system (TPDES) permit (**Appendix A**) issued to the prior owner/operator of the facility, as follows (**Table 1**).

Table 1. FEDERAL ENVIRONMENTAL STATUTES AND PERMIT REQUIREMENTS

Media	Source ID	Regulatory Status	Permit No.	Inspection Focus
CWA	TPDES permit, fact sheet, and renewal application	TPDES discharge permit	TPDES VI0000019	• Field validation of the TPDES permit and renewal application, which may also include terminal operations • Sanitary wastewater, process wastewater generation, collection and treatment systems, sampling points, and outfalls • Stormwater pollution management controls, such as drainage and collection systems, treatment, sampling points, and outfalls

FACILITY CONTACT INFORMATION

Table 2 lists the primary facility contacts.

Table 2. FACILITY CONTACT INFORMATION

Name, Title	Phone No.	Email Address
Joyce Wakefield, Environmental and Wildlife Senior Specialist	340-692-3205	jwakefield@lbenergy.com
Naief Salamah, Refinery Shift Superintendent	340-692-3184	nsalamah@lbenergy.com
Catherine Elizee, Environmental Superintendent	340-692-3073	celizee@lbenergy.com
Craig Miller, Health, Safety, and Environmental Director	340-692-3612	cmiller@lbenergy.com

FACILITY OVERVIEW

The TPDES permit issued to the prior owner/operator (Hovensa) of the facility authorized a discharge into Limetree Bay (Class C waters), Cane Garden Bay (Class B waters), and Krause Lagoon (Class B waters) under TPDES permit No.VI0000019. Limetree Bay is operating its facility

under the requirements of the TPDES permit issued to the prior owner/operator (Hovensa), including self-monitoring/reporting and effluent discharge limitations. Limetree Bay is regulated as a major point source category and is subject to 40 Code of Federal Regulations (CFR) § 419, Subpart B – Cracking Subcategory and other National Pollutant Discharge Elimination System (NPDES) regulations in 40 CFR § 122.

According to EPA's Enforcement and Compliance History Online (ECHO) website, Limetree Bay was last inspected for CWA requirements on December 16, 2020 (listed as a territory-conducted reconnaissance inspection without sampling) and on August 28, 2018 (listed as a territory-conducted compliance evaluation inspection).

According to the TPDES fact sheet and recently submitted TPDES permit renewal application (**Appendix B**), this facility has the following Standard Industrial Classification (SIC) codes (**Table3**):

Table 3. APPLICABLE SIC CODES	
SIC Code	**Description**
2911	Petroleum Refining
5171	Petroleum Bulk Stations and Terminals

Limetree Bay Refinery, LLC and Limetree Bay Terminals, LLC together operate a bulk petroleum storage terminal and refinery. The industrial complex is located on the south shore of St. Croix, USVI. A Limetree Bay site plot plan is contained in **Appendix C**.

Hovensa was originally permitted as a refinery with petroleum bulk storage terminal capabilities. The current Hovensa TPDES permit became effective on March 1, 2008. Hovensa and the refinery operations were subject to 40 CFR § 419, Subpart B – Cracking Subcategory. The permit was issued based on a crude production rate of 510,900 barrels (bbl) per day. Hovensa reduced some refinery operations in early 2011, reducing the crude through-put to roughly 350,000 bbl per day. In early 2012, all refining operations were shut down. Certain terminal operations, local product distribution, and the emission units that support those operations continued to operate. On August 31, 2012, Hovensa submitted a renewal application of the TPDES permit, which contained both terminal-only operations and a 350,000-bbl-per-day refining operation.

On January 4, 2016, Limetree Bay purchased assets from Hovensa, including the refinery process units and utilities that had been shut down in 2011 and 2012. The TPDES permit was transferred to Limetree Bay, as confirmed by letter from USVI Department of Planning and Natural Resources (DPNR) Division of Environmental Protection (DEP) dated June 2, 2016. A copy of the letter is contained in **Appendix D**.

Limetree Bay Terminals, LLC was subject to an "operating agreement" between the government of the Virgin Islands and itself, which was effective on December 1, 2015. The operating agreement required Limetree Bay Terminals, LLC to evaluate the potential for starting up refinery operations at the facility. As a result of that study, Limetree Bay Refinery, LLC was formed. Limetree Bay Refinery, LLC was formed to carry out the restart of a portion of the refinery operations. Assets to operate the refinery were transferred from Limetree Bay Terminals, LLC to Limetree Bay Refinery, LLC.

Both Limetree Bay Refinery, LLC and Limetree Bay Terminals, LLC (collectively "Limetree Bay") are parties to a shared service agreement under which both parties participate in the management of the site assets and its permits, including the TPDES permit. On June 12, 2019, Limetree Bay submitted a revised TPDES permit renewal application to DPNR (**Appendix B**). The revised permit renewal application replaced in entirety the application submitted by Hovensa. Because of common corporate and physical asset ownership and the operational nexus between Limetree Bay Refinery, LLC and Limetree Bay Terminals, LLC, the two entities applied jointly as co-permittees.

FACILITY OPERATIONS SUMMARY

As stated previously in this report, in 2012, Hovensa temporarily shut down all refinery operations at the facility. The facility operated as terminal operations only. Limetree Bay continues to operate the terminal. Some of the terminal operations include:

- 167 above-ground storage tanks with more than 34 million bbl of crude oil, refined product, and operational storage capacity
- A deep-water port with 12 docks (2 in U.S. Coast Guard caretaker status)
- Single-point mooring buoy to receive very large crude carriers (VLCCs)
- Five tugboats and five auxiliary boats

In addition to the terminal operations, Limetree Bay has the following on-site supporting operations:

- Two reverse osmosis drinking water plants capable of producing over 1 million gallons per day (MGD) of potable water
- On-site chlorination of the drinking water
- Hovensa Environmental Response Trust (HERT):
    - Formed out of bankruptcy of Hovensa to assume responsibility for and carry out the environmental remediation and compliance program on-site

- Pays for post-HERT costs and expenses
- Owns and responsible for remaining assets

- Truck rack operations
  - Jet fuel
  - Ultra-low sulfur diesel
  - Propane
  - Gasoline
  - Spill containment area connected to oily/water sewer
- Firefighting capabilities
- Ballast water disposal (very infrequent)
- Utilities wastewater from such things as non-contact cooling water and boiler blow-down

A more detailed description of the facility and its history of operations is contained in a Limetree Bay overview presentation contained in **Appendix E**.

In the revised TPDES permit renewal application submitted by Limetree Bay, the facility proposed refinery operations to be started up in two phases, phase A and phase B.

Operational phase A was to place crude unit #5 and all ancillary production units into operation. Crude unit # 5 is rated at 180,000 bbl/day. The refinery is to have operational flexibility to process a wide range of light to heavy crudes and expects to mainly process sour crudes. A process flow diagram of the production units with only crude unit #5 in operation is contained in **Appendix F**.

Operational phase B would go into production after phase A and would include crude unit #6. Crude unit #6 is also rated at 180,000 bbl/day, but when operating in tandem with crude unit #5, the total rated capacity for both units running is anticipated to be 320,000 bbl/day. The total maximum capacity for the facility when both crude units #5 and #6 are in operation may differ from that which is anticipated and will be determined when the refinery operations are up and running. A process flow diagram of the production units with both crude unit #5 and #6 in operation is contained in **Appendix G**.

Table 4 outlines the refinery process units and supporting operations that are or were put online as of the inspection on May 3, 2021. The unit process or operation is considered officially in service when the facility deems it as in stable commercial operations (SCO).

On May 13, 2021, Limetree Bay ceased refinery operations.

Table 4. REFINERY PRODUCTION UNITS AND SUPPORTING OPERATIONS			
Refining Process Units			
Process Unit	**In service**	**Date of SCO**	**Anticipated SCO**
#5 crude unit	YES	January 2021	
#6 crude unit	NO		TBD
#3 vacuum unit	YES	January 2021	
#3 platformer	NO		with Crude unit #6
#4 platformer	YES	January 2021	
#2 distillate desulfurizer	NO		TBD
#6 distillate desulfurizer	YES	January 2021	
#7 distillate desulfurizer	YES	January 2021	
#9 distillate desulfurizer	YES	January 2021	
#2 gas recovery unit	YES	January 2021	
Utility fractionater	NO		By December 2021
Penex unit	NO		By December 2021
Delayed coker unit	YES	May 2021	
Supporting Utilities			
Process Unit	**In service**	**Date of SCO**	**Anticipated SCO**
Boilers			
#8 boiler	YES	October 2020	
#9 boiler	YES	October 2020	
#10 boiler	YES	October 2020	
Powerhouse 2 – Gas Turbine (GT)/Steam Generators			
GT No. 7	YES	October 2020	
GT No. 8	YES	October 2020	
GT No. 9	YES	October 2020	
GT No. 10	YES	November 2020	
GT No. 13	YES	March 2021	
Flares			
Flare 3	YES	May 2021	
West refinery flare header	YES	May 2021	
Low-pressure fluidized catalytic cracker (FCC) flare	YES	August 2020	
East refinery flare header	YES	August 2020	
Fuel Gas			
East fuel gas system	YES	January 2021	
west fuel gas system	NO		By December 2021

Table 4. REFINERY PRODUCTION UNITS AND SUPPORTING OPERATIONS			
Amine Units			
#4 amine unit gas treatment	YES	January 2021	
#5 amine unit gas treatment	YES	January 2021	
#6 amine unit	YES	May 2021	
#7 amine unit	YES	May 2021	
Sulfur			
East sulfur recovery plant (#3 and #4 sulfur recovery unit, #2 beavon, east incinerator, sulfur pits)	YES	January 2021	
East sulfur storage area	YES	January 2021	
Sulfur storage and ship loading	NO		By December 2021
Coke			
Coke handling, storage, and loading system	NO		By December 2021

Wastewater Treatment

Limetree Bay operates an on-site wastewater treatment plant (WWTP). Wastewater is generated from various production processes and supporting utilities. The oily/water sewer captures all wastewater and production contact stormwater generated on-site. The wastewater and contact stormwater generated on-site is collected and transported to the WWTP for treatment prior to discharge. A schematic depicting the layout of the oily/water sewer is contained in **Appendix H**.

Limetree Bay submitted a water balance with the revised application. A water balance with anticipated wastewater flows was included for terminal operations only, as well as with phase A of refinery startup operations in service. Wastewater flows were not provided for phase B operations. Process flow diagrams with water balances are provided for terminal-only operations, phase A, and for phase B (**Appendix I**).

The on-site WWTP consists of pretreatment, equalization, and biological treatment as follows:

- Two American Petroleum Institute (API) oil/water separators – gravity separation of solids and oil
- Dissolved gas flotation – induced nitrogen gas for removal of dissolved and emulsified oils
- Benzene air stripper – removal of benzene, other volatile organic chemicals, and non-organic volatile constituents
- Activated sludge biological treatment units
    - Cooling and/or equalization units
    - Aeration tanks
    - Degas tanks

- Clarifiers/solids handling and waste tanks

A more detailed description of the treatment systems, along with a process flow diagram, is contained in **Appendix J**. Limetree Bay staff stated all sanitary wastewater is treated and disposed using on-site septic systems. Limetree Bay staff stated no sanitary wastewater is routed to the wastewater treatment system described above.

The WWTP is operated by a contractor. The contractor is responsible for operations. Limetree Bay staff stated the facility is responsible for upkeep and maintenance of all unit processes and operations. The contract was not reviewed or verified during the inspection.

Outfalls

All treated wastewater effluent from the WWTP is discharged through outfall 401. Outfall 401 is an internal outfall located directly downstream of treatment and just upstream of the on-site polishing pond. Effluent from the wastewater treatment plant is sampled with a composite sampler. Flow is also continuously monitored at the outfall.

The polishing pond accepts treated wastewater from outfall 401 as well as reverse osmosis reject water, unused seawater, non-contact cooling water, and non-process stormwater. The water from the polishing pond flows by gravity and discharges through outfall 001. A review of the process flow diagrams in **Appendix I** revealed that the polishing pond is not depicted in the diagram.

Stormwater

Limetree Bay is required by the TPDES permit to maintain an updated stormwater pollution prevention plan (SWPPP). The plan is part of the facility's integrated contingency plan (ICP). The SWPPP addresses non-process stormwater generated on-site and discharged to waters of the United States. The SWPPP is required to address pollutants at the facility that may be expected to affect the quality of stormwater discharged, develop best management practices that will be employed to reduce the pollutants in stormwater, and ensure compliance with the terms and conditions of the TPDES permit.

In addition to the SWPPP, the TPDES permit requires Limetree Bay to include in the facility ICP a site description and layout, a summary of potential pollutant areas and sources and potential spills and leaks, a best management practices (BMP) plan, an extensive spill prevention control and countermeasures (SPCC) plan and facility response plan to spills, and a preventative maintenance plan.

Site plans depicting the drainage basins (**Appendix K**) and stormwater drains (**Appendix L**) portray the stormwater collection and transmission system.

The permit authorizes the discharge of stormwater from six outfalls. The permit application requests that some of the outfalls either to be relocated and/or monitoring for those outfalls to be eliminated from the permit. In addition to the outfalls named in the permit, there are also emergency outfalls. These emergency outfalls are not listed in the permit, only the permit application. A description of the stormwater outfalls listed in the permit is contained in **Appendix M**.

A complete layout of the wastewater and stormwater flow systems is contained in **Appendix N**.

FIELD ACTIVITIES SUMMARY

NEIC conducted and led the field inspection from May 3-7, 2021. An opening conference was held on the afternoon of May 3, 2021, at which credentials were presented to facility contacts listed in **Table 2** of this report. NEIC was joined on the inspection by Jim Casey, EPA Region 2, and Austin Callwood, Mary Stiehler, Courtney Dickenson, and Akil Jacobs, all with USVI DPNR. During the inspection, NEIC inspector Mike Lukowich reviewed discharge monitoring reports (DMRs), production records, process flow diagrams, and self-reported noncompliance notifications and interviewed personnel at the facility. In addition, NEIC conducted a walk-through inspection of the facility.

INVESTIGATION OBSERVATIONS

NEIC identified the following observations during the CWA-TPDES compliance inspection. NEIC inspector Mike Lukowich discussed all observations with facility representatives during the closeout meeting unless otherwise noted in the observation description.

These observations are not final compliance or permit determinations. EPA will make the final compliance or permit determinations based on, among other things, its review of this report and other technical, scientific, statutory, regulatory, and facility information.

Observation: 1 CWA
Observation Summary: The water quality sampling at outfall 001 contained in the revised application submitted by Limetree Bay is not representative of the discharge during refinery production.
Citation: CWA Section 402
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix O** – Instructions: Application Form 2C
Description of Observation: Limetree Bay submitted a revised permit renewal application, which was received by USVI DPNR on June 12, 2019. The permit application contained data for the effluent characteristics for outfall 001. The sampling data submitted with the application was conducted in June 2018, November 2018, and March 2019. The facility did not put crude unit # 5 into stable commercial operations until January 2021. Most other major refinery production units were also not in service at this time. See **Table 4** of this report for dates when production units were put into operation. The sampling data submitted with the permit renewal application is not representative of the water quality of the effluent discharged when the refinery is in production.

Observation: 2 CWA
Observation Summary: The seawater intake data submitted in the application and presented in Table V-I is limited in scope. The seawater data presented is referenced in the tables in Part V., "Intake and Effluent Characteristics," Parts A through C, for both outfalls 001 and 401.
Citation: CWA Section 402
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix O** – Instructions: Application Form 2C
Description of Observation: Intake data was presented in Table V-I of the TPDES permit renewal application submitted by Limetree Bay. Calculations of effluent limits, provided by Limetree Bay, at outfall 401 and at outfall 001 do not include any "net" effluent limitations. Part V., "Intake and Effluent Characteristics," Parts A through C for outfalls 401 and 001, reference the "Intake Data" presented in Table V-I. Limetree Bay did not specify which pollutants, if any, it proposes for "net" effluent limits in the TPDES renewal permit.

Observation: 2 CWA

The instructions for Form 2C read as follows:

Reporting of Intake Data

You are not required to report data under the "Intake" columns of Tables A through C unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants in Tables A through C (i.e., an effluent limitation adjusted by subtracting the average level of the pollutant(s) present in your intake water). NPDES regulations allow net limitations only in certain circumstances. To demonstrate your eligibility, under the "Intake" columns report the average of the results of analyses of your intake water and discuss the requirements for a net limitation with your NPDES permitting authority. If your water is treated before use, test the water after it has been treated.

Observation: 3 CWA

Observation Summary: Limetree Bay requested a continuation of the thermal mixing zone in the renewal permit without demonstrating a continued need for the mixing zone or an updated size determination.

Citation: TPDES Permit No. VI0000019

VII. Receiving Water Special Standards

1. Thermal Policy

   vi. Unless Specific conditions, such as spawning ground, migratory routes, or other sections of conditions from these regulations are applicable, the mixing zone should be defined by a sphere with a specified point as the center (not necessarily the outfall but limited to one point for each installation) and a radius equal to the square root of the volume of discharge (A) expressed as millions of gallons per day. Times 200 feet; and in no case exceed 3/8 mile. The formula is:

   Radius (mixing zone) = (square root A) * 200 feet (Less than or equal to 3/8 mile)

   The proposed permit's average daily effluent flow is 36.16 MGD, and therefore the appropriate mixing zone radius shall be 1203 feet (367 meters).

Evidence:
Appendix A – 2008 TPDES Permit
Appendix B – TPDES Permit Renewal Application
Appendix O – Instructions: Application Form 2C

Description of Observation: The existing TPDES permit allows for a thermal mixing zone as defined above in the citation. Limetree Bay has switched its potable water treatment from a thermal process to a process that uses reverse osmosis (RO) membranes. Limetree Bay did not provide information to demonstrate its need to maintain the thermal mixing zone, as outlined in the permit. Limetree Bay did not provide calculations for the continued mixing zone in its permit application, which are dependent on the volume of discharge expressed as million gallons per day.

Limetree Bay used the water quality data (as discussed in Observation 1) and the thermal mixing zone to evaluate the reasonable potential to exceed, which is used to determine water quality-based effluent limits to be established in the renewal permit.

Observation: **4 CWA**
Observation Summary: Limetree Bay provided calculations of the technology-based effluent limits (TBELs) at outfall 401 for phase A and phase B, which do not match the capacity of the combined production units while both crude units #5 and #6 are operating simultaneously (i.e., phase B).
Citation: Renewal application for TPDES Permit No. VI0000019
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix O** – Instructions: Application Form 2C **Appendix P** – Refinery Photos
Description of Observation: The TPDES permit renewal submitted by Limetree Bay on June 12, 2019, to USVI DPNR contains calculations of the TBELs for the renewal permit. Limetree Bay indicated in the application that the startup of refinery production will occur in two phases. Phase A will bring crude unit #5 into service. The projected maximum crude through-put for operational phase A is 180,000 bbl/day. The calculations of the TBELs in phase A, which are dependent on the crude through-put, are presented in Table 111.C-2 of the application. Phase B will bring crude unit #6 into service, along with crude unit #5. The projected maximum crude through-put for crude unit # 6 is 180,000 bbl/day. However, with both crude units #5 and #6 in operation simultaneously, the total through-put is estimated at 320,000 bbl/day. The calculations of the TBELs in phase B, which are dependent on the crude through-put, are presented in Table 111.C-7 of the application. To calculate the TBELs in phase B, Limetree Bay used a feed stock rate of 360,000 bbl/day.

Observation: **5 CWA**
Observation Summary: Limetree Bay did not submit with the permit renewal application sampling and analysis of those Form 2F parameters not required by the current TPDES permit.
Citation: N/A
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix Q** – Instructions: Application Form 2F
Description of Observation: Limetree Bay submitted the renewal application for TPDES permit VI0000019, which contained Form 2F. Form 2F, specifically Section VII., "Discharge Information," requires analysis and characterization of the stormwater discharged at each outfall. Limetree Bay did not include data analysis for the specific pollutants listed in Form 2F for outfalls 004, 006, 007, 008, 009, and 011.

Observation: **6 CWA**
Observation Summary: Limetree Bay identified outfalls 005, 012, and 013 as emergency overflows in the TPDES permit renewal application, but those outfalls are not cited in the existing TPDES permit.
Citation: N/A
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix O** – Instructions: Application Form 2C
Description of Observation: Limetree Bay lists outfalls 005, 012, and 013 as emergency outfalls for stormwater on Form 2C submitted with the permit renewal application. These outfalls are not permitted or required to be monitored in the existing TPDES permit. Limetree did not submit the data analysis for the specific pollutants listed in Form 2F for these three outfalls.

Observation: **7 CWA**
Observation Summary: Limetree Bay requested removal of the requirement to sample outfall 006.
Citation: N/A
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix K** – Site Drainage Plan **Appendix M** – Stormwater Outfalls **Appendix Q** – Instructions: Application Form 2F **Appendix R** – Outfall Photos **Appendix S** – Industrial Stormwater Photos
Description of Observation: In its renewal application of TPDES permit VI0000019, Limetree Bay requested to eliminate sampling for outfall 006. Outfall 006 receives stormwater from off-site. A significant portion of the stormwater is from development of commercial areas and roadways to the north. In addition, it appears there may be a possible sanitary sewer overflow at a manhole along the property line that may discharge into the stormwater ditch and out through outfall 006. The drainage basin on-site contributes stormwater to the ditch. The industrial activity in the drainage basin is limited to an ice manufacturing building, but it appears it is all under roof.

Observation: **8 CWA**
Observation Summary: Limetree Bay requested relocation of the location for outfall 007.
Citation: N/A
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix K** – Site Drainage Plan **Appendix M** – Stormwater Outfalls **Appendix Q** – Instructions: Application Form 2F **Appendix R** – Outfall Photos **Appendix S** – Industrial Stormwater Photos

Observation: **8 CWA**
Description of Observation: The current sampling point for outfall 007 is located near the southeastern corner of the refinery between the north and south bays of landfarm 3. Limetree Bay is requesting to move the sampling location for outfall 007 upstream approximately 900 feet. There are no other stormwater connections or pollutant sources downstream of the proposed new sampling location.

Observation: **9 CWA**
Observation Summary: Limetree Bay requested relocation of outfall 008.
Citation: N/A
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix K** – Site Drainage Plan **Appendix M** – Stormwater Outfalls **Appendix Q** – Instructions: Application Form 2F **Appendix R** – Outfall Photos **Appendix S** – Industrial Stormwater Photos
Description of Observation: In its renewal application of TPDES permit VI0000019, Limetree Bay requested to relocate the sampling location for outfall 008. The current sampling location is in a hole cut in the steel manway cover over the stormwater junction box. Limetree Bay proposes moving the sample location upstream about 30 feet to a grated manhole. No other stormwater connections or pollutant sources were observed downstream of the proposed new sampling location. Note: Limetree Bay representatives indicated that the current sampling location is not representative because of the turbulence to the flowing stormwater, which can affect oil and grease samples.

Observation: **10 CWA**
Observation Summary: Limetree Bay requested relocation of the sampling location for outfall 011.
Citation: N/A
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix K** – Site Drainage Plan **Appendix M** – Stormwater Outfalls **Appendix Q** – Instructions: Application Form 2F **Appendix R** – Outfall Photos **Appendix S** – Industrial Stormwater Photos
Description of Observation: In its renewal application of TPDES permit VI0000019, Limetree Bay requested to relocate the sampling location for outfall 011. Limetree Bay indicated that due to access issues at the original sample location, sampling currently occurs at the coke dome stormwater detention basin, which is approximately 30 feet upstream of the original sampling location. There are no other stormwater connections or pollutant sources downstream of the proposed new sampling location.

Observation: **11 CWA**

Observation Summary: Limetree Bay is unable to sample only stormwater at outfall 001 for the effluent limits contained in the administratively continued TPDES permit.

Citation: TPDES Permit No. VI0000019

V. Stormwater Discharge Limits and Requirements

The following limits apply to stormwater discharged from outfall 001, as well as stormwater outfalls 004, 006, 007, 008, 009, 011 as described in the Hovensa submittal of EPA Form 2F:

Parameter
O&G – 15 mg/L daily maximum
TOC – 110 mg/L daily maximum
Flow (MGD) – monitor/report (daily maximum) (monthly average)

Evidence:
Appendix A – 2008 TPDES Permit
Appendix B – TPDES Permit Renewal Application
Appendix K – Site Drainage Plan
Appendix M – Stormwater Outfalls
Appendix Q – Instructions: Application Form 2F
Appendix R – Outfall Photos

Description of Observation: Limetree Bay is subject to effluent limitations for stormwater discharged from outfall 001. Outfall 001 discharges comingled waters from contaminated stormwater, RO reject water, unused intake seawater, effluent from the wastewater treatment plant (outfall 401), and non-process waters from the lagoon systems. The facility does not have a representative sampling location where stormwater can be monitored prior to mixing with other waste streams to demonstrate compliance with the stormwater effluent limits in the permit for outfall 001

Observation: **12 CWA**

Observation Summary: Limetree Bay has sulfide exceedances at outfall 401.

Citation: TPDES Permit No. VI0000019

Part 1 II.B Outfall 401

The following limits apply to outfall 401:

Parameter
sulfide – 46.22 lbs/day (daily maximum)
sulfide – 20.78 lbs/day (monthly average)

Evidence:
Appendix A – 2008 TPDES Permit
Appendix B – TPDES Permit Renewal Application
Appendix J – WWTP Process Flow Diagram: Limetree Bay
Appendix T – Limetree Bay CWA Incidents
Appendix U – Lab Analysis, Outfall 401, November 2020 to April 2021
Appendix V – Pretreatment-WWTP Photos

Description of Observation: Limetree Bay is subject to technology-based effluent limits in the TPDES permit as outlined above for sulfides. A table listing Limetree CWA incidents is

Observation: **12 CWA**
contained in **Appendix T**. Items 13-16 list effluent limit exceedances for sulfides at outfall 401.

Observation: **13 CWA**
Observation Summary: Limetree Bay had numerous spills that reached "waters of the United States."
Citation: Part II – Standard Conditions C. 16 Oil and Hazardous Substance Liability. The imposition of responsibilities upon or the institution of any legal action against the permittee under Section 311 of the CWA shall be in conformance with regulations promulgated pursuant to Section 311 to discharges from facilities with TPDES permits.
Evidence: **Appendix A** – 2008 TPDES Permit **Appendix B** – TPDES Permit Renewal Application **Appendix T** – Limetree Bay CWA Incidents **Appendix W** – Sheen and Spills Notifications to DPNR
Description of Observation: Limetree Bay is authorized to discharge to "waters of the United States" in accordance with its TPDES permit. All oil and hazardous substances spills reaching "waters of the United States" or any noncompliance must be reported to USVI DPNR. A table listing Limetree Bay CWA incidents are contained in **Appendix T**. Items 1-8 and 10-12 list CWA incidents or spills.